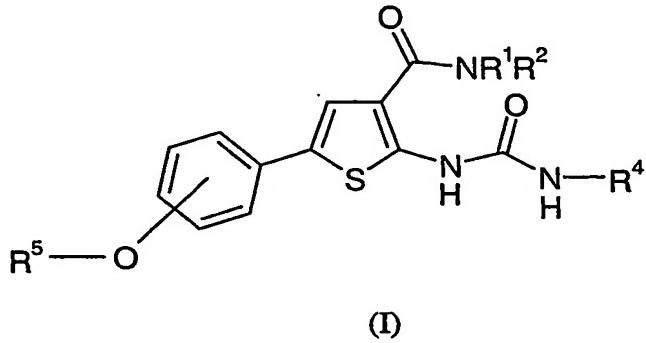


CLAIMS

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1. A compound of formula (I) or a pharmaceutically acceptable salt or *in vivo*-hydrolysable precursors thereof:



5

wherein:

R^1 and R^2 are at each occurrence independently selected from H, optionally substituted C₁-alkyl, or optionally substituted heterocyclyl; with the proviso that R^1 and R^2 are not both H; or R^1 and R^2 and the N to which they are attached in combination form an optionally substituted heterocyclyl;

10 R^4 is selected from H, OH, optionally substituted carbocyclyl, optionally substituted heterocyclyl, or optionally substituted C₁-alkyl;

R^5 is selected from H, optionally substituted carbocyclyl, or optionally substituted C₁-alkyl.

15

2. A compound of formula (I) or a pharmaceutically salt or an *in vivo*-hydrolysable precursor thereof as recited in claim 1 wherein R^2 , R^4 , and R^5 have any of the meanings defined in claim 1 and

R^1 is an optionally substituted heterocyclyl.

20

3. A compound of formula (I) or a pharmaceutically salt or an *in vivo*-hydrolysable precursor thereof as recited in claim 1 wherein R^2 , R^4 , and R^5 have any of the meanings defined in claim 1 and R^1 is an optionally substituted heterocyclyl wherein 1,2, or 3 substituents is/are independently selected from halogen, nitro, amino, cyano, trifluoromethyl, alkyl, alkenyl, alkynyl, haloalkyl, alkoxy, hydroxy, alkylhydroxy, carbonyl, -CH(OH)CH₃, -CH₂NH-alkyl-OH,

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alkyl-(OH)CH₃, -CH₂-phenyl-(OCH₃)₂, -Oalkyl, -OCH₃, -Ophenyl, -OCOalkyl, -NHCHO, -Nalkyl, -N-(alkyl)-CHO, -NH-CO-amino, -N-(alkyl)-CO-amino, -NH-COalkyl, -N-(alkyl)-COalkyl, -carboxy, -amidino, -CO-amino, -CO-alkyl, -CO₂alkyl, mercapto, -Salkyl, -SCH₂furanyl, -SO(alkyl), -SO₂(alkyl), -SO₂-amino, -alkylsulfonylamino, phenyl, anisole,

5 dimethoxyphenyl, trimethoxyphenyl, halophenyl, cycloalkyl, heterocyclyl, -alkyl-NH-cycloalkyl, -alkyl-NH- heterocyclyl, -alkyl-NH-alkyl-OH, -C(=O)OC(CH₃)₃, -N(CH₃)₂, -N(CH₂CH₃)₂, -alkyl-NH-alkyl- heterocyclyl, -alkyl-aryl, -methyl-phenyl, alkyl-polycyclyl, alkyl-amino, alkyl-hydroxy, -CH₂NH-alkyl-heterocyclyl, -CH₂NHCH₂CH(CH₃)₂, vicinal -O(alkyl)O-, vicinal -OC(haloalkyl)O-, vicinal -CH₂O(alkyl)O-, vicinal -S(alkyl)S- and -O(alkyl)S-.

10

4. A compound of formula (I) or a pharmaceutically salt or an *in vivo*-hydrolysable precursor thereof as recited in claim 1 wherein R², R⁴, and R⁵ have any of the meanings defined in claim 1 and R¹ is an optionally substituted heterocyclyl wherein 1,2, or 3 substitutents is/are independently selected from: -OH, C(=O)OC(CH₃)₃, NH₂, C₁₋₆alkyl, methoxybenzene, or

15 dimethoxy benzene.

5. A compound of formula (I) or a pharmaceutically salt or an *in vivo*-hydrolysable precursor thereof as recited in claim 1 wherein R², R⁴, and R⁵ have any of the meanings defined in claim 1 and

20

R¹ is a heterocyclyl wherein heterocyclyl is selected from piperdanyl, pyridinyl, pyrrolidinyl, pyrazinyl, azepanyl, azetidinyl, azabicycloziny, furanyl, thienyl.

25

6. A compound of formula (I) or a pharmaceutically salt or an *in vivo*-hydrolysable precursor thereof as recited in claim 1 wherein R¹, R⁴, and R⁵ have any of the meanings defined in claim 1 and

R² is H.

30

7. A compound of formula (I) or a pharmaceutically salt or an *in vivo*-hydrolysable precursor thereof as recited in claim 1 wherein R¹, R², and R⁵ have any of the meanings defined in claim 1 and

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R⁴ is H.

8. A compound of formula (I) or a pharmaceutically salt or an *in vivo*-hydrolysable precursor thereof as recited in claim 1 wherein R¹, R², and R⁴ have any of the meanings defined
5 in claim 1 and

R⁵ is H or an optionally substituted C₁₋₆alkyl.

9. A compound of formula (I) or a pharmaceutically salt or an *in vivo*-hydrolysable precursor thereof as recited in claim 1 wherein R¹, R², and R⁴ have any of the meanings defined
10 in claim 1 and

R⁵ is H or an optionally substituted C₁₋₆alkyl wherein 1,2 or 3 substitutents is/are independently selected from: NH₂, NHCH₃, N(CH₂CH₃)₂, N(CH₃)₂, OCH₃, OH, -C₁₋₆alkyl, morpholino, piperidinyl, pyrrolodinyl.

15 10. A compound of formula (I) or a pharmaceutically salt or an *in vivo*-hydrolysable precursor thereof as recited in claim 1 wherein R¹, R², and R⁴ have any of the meanings defined in claim 1 and

R⁵ is H or an optionally substituted C₁₋₃alkyl.

20 11. A compound of formula (I) or a pharmaceutically salt or an *in vivo*-hydrolysable precursor thereof as recited in claim 1 wherein R¹, R², and R⁴ have any of the meanings defined in claim 1 and

25 R⁵ is H or an optionally substituted C₁₋₃alkyl wherein 1,2 or 3 substitutents is/are independently selected from: NH₂, NHCH₃, N(CH₂CH₃)₂, N(CH₃)₂, OCH₃, OH, -C₁₋₆alkyl, morpholino, piperidinyl, pyrrolodinyl.

12. A compound of formula (I) or a pharmaceutically salt or an *in vivo*-hydrolysable precursor thereof, as recited in claim 1 wherein:

R¹ is an optionally substituted heterocyclyl;

30 R² is H;

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R⁴ is H;

R⁵ is H or an optionally substituted C₁₋₆alkyl.

13. A compound of formula (I) or a pharmaceutically salt or an *in vivo*-hydrolysable

5 precursor thereof, as recited in claim 1 wherein:

R¹ is an optionally substituted heterocyclyl wherein the substituent is selected from one or more of the following: -NH₂, C₁₋₆alkyl, -C(=O)OC(CH₃)₃,

R² is H;

R⁴ is H;

10 R⁵ is H or an optionally substituted C₁₋₆alkyl wherein the substituent is selected from one or more of the following: -C₁₋₆alkyl, -N(C₁₋₃alkyl)₂.

14. A compound of formula (I) or a pharmaceutically salt or an *in vivo*-hydrolysable

precursor thereof, as recited in claim 1 wherein:

15 R¹ is an optionally substituted heterocyclyl wherein the substituent is selected from one or more of the following: -NH₂, C₁₋₆alkyl, -C(=O)OC(CH₃)₃,

R² is H;

R⁴ is H;

20 R⁵ is H or an optionally substituted C₁₋₃alkyl wherein 1,2 or 3 substitutents is/are independently selected from: NH₂, NHCH₃, N(CH₂CH₃)₂, N(CH₃)₂, OCH₃, OH, -C₁₋₆alkyl, morpholino, piperidinyl, pyrrolodinyl.

15. A compound of formula (I) or a pharmaceutically salt or an *in vivo*-hydrolysable precursor thereof, as recited in claim 1 wherein:

25 R¹ is a heterocyclyl;

R² is H;

R⁴ is H;

R⁵ is H or a C₁₋₆alkyl.

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16. A compound of formula (I) or a pharmaceutically salt or an *in vivo*-hydrolysable precursor thereof, as recited in claim 1 wherein:

R¹ is a 6-membered heterocyclyl containing at least one N in the ring;

R² is H;

5 R⁴ is H;

R⁵ is a C₁₋₃alkyl.

17. A compound of formula (I) selected from:

- tert-butyl 3-{{(2-[(aminocarbonyl)amino]-5-{4-[2-(diethylamino)ethoxy]phenyl}-3-thienyl)carbonyl}amino}piperidine-1-carboxylate;
- 10 2-[(aminocarbonyl)amino]-5-{4-[2-(diethylamino)ethoxy]phenyl}-N-piperidin-3-ylthiophene-3-carboxamide;
- 2-[(aminocarbonyl)amino]-5-{3-[2-(diethylamino)ethoxy]phenyl}-N-piperidin-3-ylthiophene-3-carboxamide;
- 15 2-[(aminocarbonyl)amino]-5-(4-methoxyphenyl)-N-[(3S)-piperidin-3-yl]thiophene-3-carboxamide;
- tert-butyl 3-{{(2-[(aminocarbonyl)amino]-5-{3-[2-(diethylamino)ethoxy]phenyl}-3-thienyl)carbonyl}amino}piperidine-1-carboxylate;
- 2-[(aminocarbonyl)amino]-5-{4-[2-(diethylamino)ethoxy]phenyl}-N-piperidin-4-ylthiophene-3-carboxamide;
- 20 2-[(aminocarbonyl)amino]-N-[(3R)-azepan-3-yl]-5-(4-methoxyphenyl)thiophene-3-carboxamide; N-(3-[(4-aminopiperidin-1-yl)carbonyl]-5-{4-[2-(diethylamino)ethoxy]phenyl}-2-thienyl)urea;
- 2-[(aminocarbonyl)amino]-5-{4-[2-(diethylamino)ethoxy]phenyl}-N-[3-(hydroxymethyl)phenyl]thiophene-3-carboxamide;
- 25 2-[(aminocarbonyl)amino]-5-{3-[2-(diethylamino)ethoxy]phenyl}-N-piperidin-4-ylthiophene-3-carboxamide;
- 2-[(aminocarbonyl)amino]-N-(2-aminoethyl)-5-(4-methoxyphenyl)thiophene-3-carboxamide;
- 2-[(aminocarbonyl)amino]-5-(4-methoxyphenyl)-N-piperidin-4-ylthiophene-3-carboxamide;
- 2-[(aminocarbonyl)amino]-5-{3-[2-(diethylamino)ethoxy]phenyl}-N-pyridin-3-ylthiophene-3-carboxamide;
- 30

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- 2-[(aminocarbonyl)amino]-5-(4-methoxyphenyl)-N-(1-methylpiperidin-4-yl)thiophene-3-carboxamide;
- 2-[(aminocarbonyl)amino]-5-(4-methoxyphenyl)-N-[(3S)-1-methylazepan-3-yl]thiophene-3-carboxamide;
- 5 2-[(aminocarbonyl)amino]-5-{3-[2-(diethylamino)ethoxy]phenyl}-N-[3-(hydroxymethyl)phenyl]thiophene-3-carboxamide;
- 2-[(aminocarbonyl)amino]-5-{4-[2-(diethylamino)ethoxy]phenyl}-N-pyrrolidin-3-ylthiophene-3-carboxamide;
- 10 2-[(aminocarbonyl)amino]-5-{4-[2-(diethylamino)ethoxy]phenyl}-N-pyridin-3-ylthiophene-3-carboxamide;
- 2-[(aminocarbonyl)amino]-5-(4-methoxyphenyl)-N-[(3S)-1-methylpiperidin-3-yl]thiophene-3-carboxamide;
- 2-[(aminocarbonyl)amino]-5-{3-[2-(diethylamino)ethoxy]phenyl}-N-pyrrolidin-3-ylthiophene-3-carboxamide;
- 15 2-[(aminocarbonyl)amino]-5-(4-methoxyphenyl)-N-[(3R)-piperidin-3-ylmethyl]thiophene-3-carboxamide;
- 2-[(aminocarbonyl)amino]-5-(4-methoxyphenyl)-N-[(3S)-pyrrolidin-3-yl]thiophene-3-carboxamide;
- 2-[(aminocarbonyl)amino]-5-(4-methoxyphenyl)-N-[(3R)-pyrrolidin-3-yl]thiophene-3-carboxamide;
- 20 2-[(aminocarbonyl)amino]-N-[2-(dimethylamino)ethyl]-5-(4-methoxyphenyl)thiophene-3-carboxamide;
- 2-[(aminocarbonyl)amino]-N-[2-(diethylamino)ethyl]-5-(4-methoxyphenyl)thiophene-3-carboxamide;
- 25 2-[(aminocarbonyl)amino]-N-[(3S)-azepan-3-yl]-5-(4-methoxyphenyl)thiophene-3-carboxamide;
- 2-[(aminocarbonyl)amino]-5-(4-methoxyphenyl)-N-[(3R)-piperidin-3-yl]thiophene-3-carboxamide;
- 2-[(aminocarbonyl)amino]-5-(4-methoxyphenyl)-N-(piperidin-4-ylmethyl)thiophene-3-carboxamide;
- 30 2-[(aminocarbonyl)amino]-5-(4-methoxyphenyl)-N-pyrrolidin-3-ylthiophene-3-carboxamide;

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- 2-[(aminocarbonyl)amino]-N-(1-ethylpiperidin-3-yl)-5-(4-methoxyphenyl)thiophene-3-carboxamide;
- 2-[(aminocarbonyl)amino]-N-[(3S)-1-ethylazepan-3-yl]-5-(4-methoxyphenyl)thiophene-3-carboxamide;
- 5 2-[(aminocarbonyl)amino]-5-(3-hydroxyphenyl)-N-piperidin-4-ylthiophene-3-carboxamide;
- 2-[(aminocarbonyl)amino]-5-(4-hydroxyphenyl)-N-piperidin-4-ylthiophene-3-carboxamide;
- 2-[(aminocarbonyl)amino]-5-(3-methoxyphenyl)-N-piperidin-4-ylthiophene-3-carboxamide;
- tert-butyl (3S)-3-({[2-[(aminocarbonyl)amino]-5-(4-methoxyphenyl)-3-thienyl]carbonyl}amino)pyrrolidine-1-carboxylate;
- 10 2-[(aminocarbonyl)amino]-5-(4-methoxyphenyl)-N-piperidin-3-ylthiophene-3-carboxamide;
- 2-[(aminocarbonyl)amino]-N-(1-benzylpiperidin-4-yl)-5-(4-methoxyphenyl)thiophene-3-carboxamide;
- tert-butyl 3-({[2-[(aminocarbonyl)amino]-5-(4-methoxyphenyl)-3-thienyl]carbonyl}amino)piperidine-1-carboxylate;
- 15 2-[(aminocarbonyl)amino]-5-[4-(2-piperidin-1-ylethoxy)phenyl]-N-(2-pyridin-4-ylethyl)thiophene-3-carboxamide;
- 2-[(aminocarbonyl)amino]-5-[4-(2-piperidin-1-ylethoxy)phenyl]-N-(2-pyridin-4-ylethyl)thiophene-3-carboxamide;
- 2-[(aminocarbonyl)amino]-N-azetidin-3-yl-5-(4-methoxyphenyl)thiophene-3-carboxamide;
- 20 2-[(aminocarbonyl)amino]-5-(4-methoxyphenyl)-N-[(2S)-pyrrolidin-2-ylmethyl]thiophene-3-carboxamide;
- 2-[(aminocarbonyl)amino]-5-(4-methoxyphenyl)-N-pyridin-4-ylthiophene-3-carboxamide;
- 2-[(aminocarbonyl)amino]-5-(4-methoxyphenyl)-N-(2-piperazin-1-ylethyl)thiophene-3-carboxamide;
- 25 2-[(aminocarbonyl)amino]-5-(4-methoxyphenyl)-N-(2-piperidin-1-ylethyl)thiophene-3-carboxamide;
- 2-[(aminocarbonyl)amino]-N-1-azabicyclo[2.2.2]oct-3-yl-5-(4-methoxyphenyl)thiophene-3-carboxamide;
- 2-[(aminocarbonyl)amino]-N-(2-hydroxyethyl)-5-(4-hydroxyphenyl)thiophene-3-carboxamide;

- 2-[(aminocarbonyl)amino]-N-(trans-4-hydroxycyclohexyl)-5-(4-methoxyphenyl)thiophene-3-carboxamide;
- 2-[(aminocarbonyl)amino]-5-(4-hydroxyphenyl)-N-(2-pyridin-4-ylethyl)thiophene-3-carboxamide;
- 5 2-[(aminocarbonyl)amino]-5-(4-methoxyphenyl)-N-(2-piperazin-1-ylethyl)thiophene-3-carboxamide;
- 2-[(aminocarbonyl)amino]-5-(4-methoxyphenyl)-N-(2-pyridin-4-ylethyl)thiophene-3-carboxamide;
- 2-[(aminocarbonyl)amino]-5-(4-hydroxyphenyl)-N-(2-pyridin-3-ylethyl)thiophene-3-carboxamide;
- 10 2-[(aminocarbonyl)amino]-5-(4-methoxyphenyl)-N-(2-pyridin-3-ylethyl)thiophene-3-carboxamide;
- 2-[(aminocarbonyl)amino]-5-(4-methoxyphenyl)-N-(2-pyridin-3-ylethyl)thiophene-3-carboxamide;
- 2-[(aminocarbonyl)amino]-5-(4-methoxyphenyl)-N-(2,2,6,6-tetramethylpiperidin-4-yl)thiophene-3-carboxamide;
- 15 2-[(aminocarbonyl)amino]-5-(2-methoxyphenyl)-N-piperidin-4-ylthiophene-3-carboxamide;
- 2-[(aminocarbonyl)amino]-5-(4-methoxyphenyl)-N-(tetrahydrofuran-2-ylmethyl)thiophene-3-carboxamide;
- tert-butyl (3R)-3-({[2-[(aminocarbonyl)amino]-5-(4-methoxyphenyl)-3-thienyl]carbonyl}amino)piperidine-1-carboxylate;
- 20 2-[(aminocarbonyl)amino]-5-(4-methoxyphenyl)-N-(pyridin-3-ylmethyl)thiophene-3-carboxamide;
- tert-butyl 3-({[2-[(aminocarbonyl)amino]-5-(4-methoxyphenyl)-3-thienyl]carbonyl}amino)azetidine-1-carboxylate;
- 2-[(aminocarbonyl)amino]-5-(4-methoxyphenyl)-N-(pyridin-4-ylmethyl)thiophene-3-carboxamide;
- 25 2-[(aminocarbonyl)amino]-5-(4-methoxyphenyl)-N-(3-methoxypropyl)thiophene-3-carboxamide;
- 2-[(aminocarbonyl)amino]-5-(4-methoxyphenyl)-N-[2-(2-thienyl)ethyl]thiophene-3-carboxamide;
- 2-[(aminocarbonyl)amino]-5-(4-methoxyphenyl)-N-(2-thienylmethyl)thiophene-3-carboxamide;
- 30 N-[3-(1,4-diazepan-1-ylcarbonyl)-5-(4-methoxyphenyl)-2-thienyl]urea;

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- 2-[(aminocarbonyl)amino]-N-(2-methoxyethyl)-5-(4-methoxyphenyl)thiophene-3-carboxamide;
2-[(aminocarbonyl)amino]-5-(4-hydroxyphenyl)-N-(2-thienylmethyl)thiophene-3-carboxamide;
2-[(aminocarbonyl)amino]-N-{2-[(2-furylmethyl)thio]ethyl}-5-(4-methoxyphenyl)thiophene-3-
carboxamide;
- 5 2-[(aminocarbonyl)amino]-5-(4-hydroxyphenyl)-N-[2-(2-thienyl)ethyl]thiophene-3-carboxamide;
N-(3-[(4-aminopiperidin-1-yl)carbonyl]-5-{3-[2-(diethylamino)ethoxy]phenyl}-2-thienyl)urea;
2-[(aminocarbonyl)amino]-5-(4-methoxyphenyl)-N-[(3R)-piperidin-3-ylmethyl]thiophene-3-
carboxamide;
- 10 2-[(aminocarbonyl)amino]-5-(4-methoxyphenyl)-N-(1,2,3,4-tetrahydroquinolin-3-yl)thiophene-
3-carboxamide;
- 15 2-[(aminocarbonyl)amino]-N-(1,3-benzodioxol-5-ylmethyl)-5-(4-methoxyphenyl)thiophene-3-
carboxamide;
- 2-[(aminocarbonyl)amino]-N-(3-methoxybenzyl)-5-(4-methoxyphenyl)thiophene-3-carboxamide;
2-[(aminocarbonyl)amino]-N-[2-(3,4-dimethoxyphenyl)ethyl]-5-(4-methoxyphenyl)thiophene-3-
15 carboxamide;
- 2-[(aminocarbonyl)amino]-5-(4-methoxyphenyl)-N-[(5-methyl-2-furyl)methyl]thiophene-3-
carboxamide;
- 2-[(aminocarbonyl)amino]-5-(4-methoxyphenyl)-N-(pyridin-2-ylmethyl)thiophene-3-
carboxamide;
- 20 2-[(aminocarbonyl)amino]-N-(4-fluorobenzyl)-5-(4-methoxyphenyl)thiophene-3-carboxamide;
tert-butyl 4-({[2-[(aminocarbonyl)amino]-5-(3-methoxyphenyl)-3-
thienyl]carbonyl}amino)piperidine-1-carboxylate;
- 2-[(aminocarbonyl)amino]-N-(2-methoxybenzyl)-5-(4-methoxyphenyl)thiophene-3-carboxamide;
2-[(aminocarbonyl)amino]-5-(4-methoxyphenyl)-N-(2-phenoxyethyl)thiophene-3-carboxamide;
- 25 2-[(aminocarbonyl)amino]-5-(4-methoxyphenyl)-N-(2-pyridin-2-ylethyl)thiophene-3-
carboxamide;
- tert-butyl 4-({[2-[(aminocarbonyl)amino]-5-(4-methoxyphenyl)-3-
thienyl]carbonyl}amino)piperidine-1-carboxylate;
- 2-[(aminocarbonyl)amino]-N-(4-methoxybenzyl)-5-(4-methoxyphenyl)thiophene-3-carboxamide;

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- 2-[(aminocarbonyl)amino]-5-{4-[2-(diethylamino)ethoxy]phenyl}-N-[(3S)-piperidin-3-yl]thiophene-3-carboxamide;
- 2-[(aminocarbonyl)amino]-5-{4-[2-(diethylamino)ethoxy]phenyl}-N-[(3R)-piperidin-3-yl]thiophene-3-carboxamide;
- 5 tert-butyl (3S)-3-{{(2-[(aminocarbonyl)amino]-5-{4-[2-(diethylamino)ethoxy]phenyl}-3-thienyl)carbonyl}amino}piperidine-1-carboxylate;
- 2-[(aminocarbonyl)amino]-N-[(3S)-azepan-3-yl]-5-{4-[2-(diethylamino)ethoxy]phenyl}thiophene-3-carboxamide;
- tert-butyl (3R)-3-{{(2-[(aminocarbonyl)amino]-5-{4-[2-(diethylamino)ethoxy]phenyl}-3-thienyl)carbonyl}amino}piperidine-1-carboxylate;
- 10 N-[3-{{(3S)-3-aminoazepan-1-yl}carbonyl}-5-(4-methoxyphenyl)-2-thienyl]urea;
- 5-{4-[2-(diethylamino)ethoxy]phenyl}-2-{{(pyrazin-2-ylamino)carbonyl}amino}-N-[(3S)-pyrrolidin-3-yl]thiophene-3-carboxamide;
- 15 5-{3-[2-(diethylamino)ethoxy]phenyl}-2-{{(pyrazin-2-ylamino)carbonyl}amino}-N-[(3S)-pyrrolidin-3-yl]thiophene-3-carboxamide;
- 5-{3-[2-(diethylamino)ethoxy]phenyl}-N-piperidin-4-yl-2-{{(pyrazin-2-ylamino)carbonyl}amino}thiophene-3-carboxamide;
- N-[(3S)-azepan-3-yl]-5-(4-methoxyphenyl)-2-{{(pyrazin-2-ylamino)carbonyl}amino}thiophene-3-carboxamide;
- 20 5-{3-[2-(diethylamino)ethoxy]phenyl}-N-piperidin-3-yl-2-{{(pyrazin-2-ylamino)carbonyl}amino}thiophene-3-carboxamide;
- N-(2-aminoethyl)-5-(4-methoxyphenyl)-2-{{(pyrazin-2-ylamino)carbonyl}amino}thiophene-3-carboxamide;
- 5-{4-[2-(diethylamino)ethoxy]phenyl}-N-piperidin-3-yl-2-{{(pyrazin-2-ylamino)carbonyl}amino}thiophene-3-carboxamide;
- 25 5-(4-methoxyphenyl)-N-piperidin-4-yl-2-{{(pyrazin-2-ylamino)carbonyl}amino}thiophene-3-carboxamide;
- tert-butyl 3-{{(5-{3-[2-(diethylamino)ethoxy]phenyl}-2-{{(pyrazin-2-ylamino)carbonyl}amino}-3-thienyl)carbonyl}amino}piperidine-1-carboxylate;

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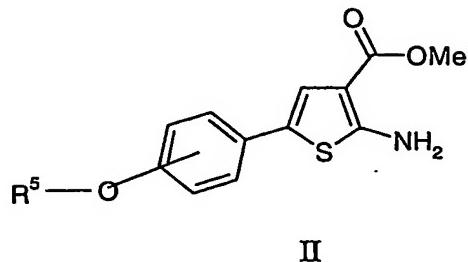
- 5-{4-[2-(diethylamino)ethoxy]phenyl}-N-piperidin-4-yl-2-{{(pyrazin-2-ylamino)carbonyl}amino}thiophene-3-carboxamide;
- 5-(4-methoxyphenyl)-2-{{(pyrazin-2-ylamino)carbonyl}amino}-N-[(3S)-pyrrolidin-3-yl]thiophene-3-carboxamide;
- 5 N-[3-(1,4-diazepan-1-ylcarbonyl)-5-(4-methoxyphenyl)-2-thienyl]-N'-pyrazin-2-ylurea;
- N-[3-[(3-aminopyrrolidin-1-yl)carbonyl]-5-(4-methoxyphenyl)-2-thienyl]-N'-pyrazin-2-ylurea;
- tert-butyl 4-{{(5-(4-methoxyphenyl)-2-{{(pyrazin-2-ylamino)carbonyl}amino}-3-thienyl)carbonyl}amino}piperidine-1-carboxylate;
- tert-butyl 3-{{(5-(4-[2-(diethylamino)ethoxy]phenyl)-2-{{(pyrazin-2-ylamino)carbonyl}amino}-3-thienyl)carbonyl}amino}piperidine-1-carboxylate;
- 5-[4-(2-diethylamino-ethoxy)-phenyl]-2-(3-hydroxy-urea)-thiophene-3-carboxylic acid-(S)-piperidin-3-ylamide;
- 2-[(aminocarbonyl)amino]-N-[(3S)-azepan-3-yl]-5-(3-methoxyphenyl)thiophene-3-carboxamide;
- 2-[(aminocarbonyl)amino]-5-(2-hydroxyphenyl)-N-[(3S)-piperidin-3-yl]thiophene-3-carboxamide;
- 15 2-[(aminocarbonyl)amino]-5-(3-methoxyphenyl)-N-[(3S)-piperidin-3-yl]thiophene-3-carboxamide;
- 2-[(aminocarbonyl)amino]-5-[2-(benzyloxy)phenyl]-N-[(3S)-piperidin-3-yl]thiophene-3-carboxamide.
- 20 18. A compound of formula (I) or a pharmaceutically acceptable salt thereof as recited in any one of claims 1 to 17 for use as a medicament.
19. The use of a compound of formula (I) or a pharmaceutically acceptable salt thereof as recited in any one of claims 1 to 17, in the manufacture of a medicament for the treatment or prophylaxis of disorders associated with cancer.
- 25 20. A method for the treatment of cancer comprising administering to a human a therapeutically effective amount of a compound of formula (I) or a pharmaceutically acceptable salt thereof as defined in any one of claims 1 to 17.

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21. A method for the treatment of breast cancer, colorectal cancer, ovarian cancer, lung (non small cell) cancer, malignant brain tumors, sarcomas, melanoma and lymphoma by administering a compound of formula I or a pharmaceutically acceptable salt thereof as defined in any one of
5 claims 1 to 17.
22. A method of treating cancer by administering to a human a compound of formula (I) or a pharmaceutically acceptable salt thereof as defined in any one of claims 1 to 17 and an anti-tumor agent.
10
23. A method of treating cancer by administering to a human a compound of formula (I) or a pharmaceutically acceptable salt thereof as defined in any one of claims 1 to 17 and a DNA damaging agent.
- 15 24. A method for the treatment of infections associated with cancer comprising administering to a host in need of such treatment a therapeutically effective amount of a compound of formula (I) or a pharmaceutically acceptable salt thereof as defined in any one of claims 1 to 17.
- 20 25. A method for the prophylaxis treatment of infections associated with cancer comprising administering to a host in need of such treatment a therapeutically effective amount of a compound of formula (I) or a pharmaceutically acceptable salt thereof as defined in any one of claims 1 to 17.
- 25 26. A pharmaceutical composition comprising a compound of formula (I) or a pharmaceutically acceptable salt thereof as defined in any one of claims 1 to 17 together with at least one pharmaceutically acceptable carrier, diluent or excipient.
30
27. A process for the preparation of a compound of formula (I) or a pharmaceutically acceptable salt or *in vivo*-hydrolysable precursors thereof as defined in any one of claims 1 to 17, which comprises:

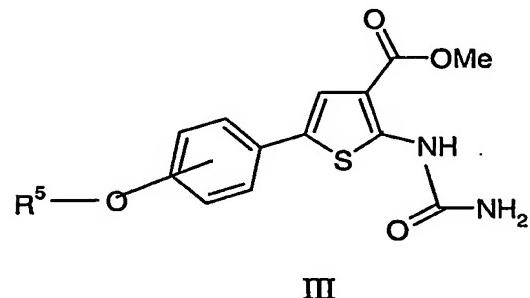
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(a) the reaction of a 2-aminothiophene shown below as Formula II

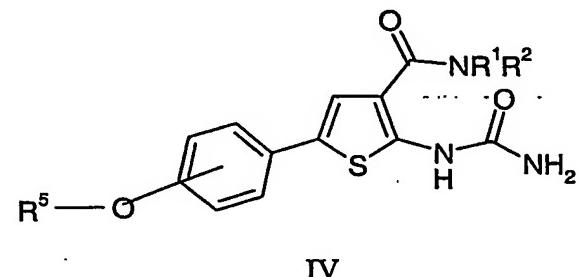


wherein the hydrogen at the 2-amino position is displaced to form an amide, shown as formula III

5 below



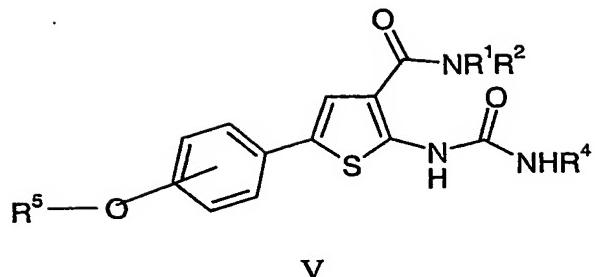
wherein the methyl ester is converted to an amide utilizing the desired amine in conjunction with an aluminate organometallic complex, to give the product shown as formula IV below:



Wherein the amide is converted to various substituted secondary ureas by the reaction with various isocyanantes to yield the product shown as fromula V below:

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28. The use of a compound of formula (VI) below or a pharmaceutically acceptable salt or an
5 in vivo hydrolysable precursor in the manufacture of a compound of formula (I) as set forth in
any one of claims 1-17.

